



Brunsing Associates, Inc.

June 14, 2005

Project No. 617

Mr. Gary Holtz
Sonoma County Department of Health Services
3273 Airway Drive, Suite D
Santa Rosa, California 95403-2097

Semi-Annual Groundwater Monitoring Report-March 2005
18155 Sonoma Highway
Boyes Hot Springs, California

Dear Mr. Holtz:

This report presents the results of the groundwater monitoring performed on March 9, 2005 by Brunsing Associates, Inc. (BAI) at 18155 Sonoma Highway, Boyes Hot Springs, California (Plates 1 and 2). Groundwater sampling is performed in monitoring wells MW-2 and MW-4 on a semi-annual basis and the samples are analyzed only for the compound 1,2-dichloroethane (1,2-DCA), as requested in the SCDHS-EHD letter dated November 3, 2003.

Site History

Standard Oil built and occupied a gasoline service station with underground fuel tanks in the center of the property in the mid-1940's. The site was used as a service station for an auto dealership/repair shop until its closure in 1965, according to a Van Houten Consultants, Inc. (Van Houten) report titled, "Discharge Evaluation for Removal of Buried Fuel Tanks," dated December 22, 1986. In the December 1986 report by Van Houten, the Site Plan indicates that the site initially contained six underground storage tanks: four fuel tanks (three 2,000-gallon tanks and one 5,500-gallon tank), a 500-gallon waste oil tank, and a concrete septic tank. The service station pump island was located on the west side of the site, adjacent to Sonoma Highway. According to Ms. Millie Gallo, a pump station was also present on the easterly side of the site, primarily for family use. In December 1986, Van Houten reported that the fuel tanks had not been in use for 20 years, and that the waste oil tank had not been used for six years.

The fuel tanks were emptied of liquid on May 21, 1986 by Fuel Oil Polishing Company-Bay Area of Sonoma, California, as stated in Van Houten's report titled "Quarterly Ground Water Sampling and Downgradient Hydrogeologic Investigation," dated April 30, 1993. Two soil borings were drilled on June 5, 1986 to the northeast and southwest of the fuel tanks; the soil samples were analyzed by Anatec Laboratories. The analytical results indicated that the soil samples from boring 1 contained none of the analytes. The soil samples collected from boring 2 contained total petroleum hydrocarbons (TPH) as gasoline concentrations at 530 parts per million (ppm) at 7 feet and 14 ppm at 12 feet.

The tanks were removed from two excavations on October 27, 1986 by Hammond Construction of Sonoma, California. The tanks were hauled away from the site by H&H Ship Service of San Francisco, California. Samples collected from the volcanic bedrock below the gasoline tanks ranged in concentrations from 18 to 390 ppm of TPH as gasoline. Volcanic bedrock samples collected from below the waste oil tank were reported to contain 22 to 760 ppm of "total heavy hydrocarbons".

Composite samples from the excavated materials contained concentrations ranging from 440 to 890 ppm of TPH as gasoline. The excavated materials were stockpiled on site and were fenced and aerated for approximately 4 months. According to Van Houten's April 30, 1993 report, the material was returned to the excavation, upon approval by Mark Sullivan of the SCDHS-EHD, and additional clean fill was imported to bring the excavation up to grade on April 25, 1987.

Van Houten prepared an "Initial Hydrogeologic Investigation" report, dated April 15, 1991. The report provides a well survey for the area, a discussion of the drilling of borings 1 and 2, and the installation of groundwater monitoring wells MW-1 through MW-4. Well construction details are also summarized in Table 3.

Soil samples collected during the drilling of the borings and well boreholes were analyzed for TPH as gasoline, TPH as diesel, TPH as motor oil, non polar oil and grease, benzene, toluene, ethylbenzene, and xylenes (BTEX), chlorinated hydrocarbons, organic lead, and for five metals (nickel, cadmium, chromium, lead and zinc). The results of the soil analyses indicated that petroleum hydrocarbon contamination in soils existed at monitoring well MW-1 at six and eleven feet below ground surface (bgs), and in boring 1 at 5 feet bgs. No chlorinated hydrocarbons or metals greater than the total threshold limit concentrations were reported.

Quarterly groundwater monitoring and monthly groundwater elevation measurements were initiated at the site in March 1992; an initial groundwater monitoring round was also performed in March 1991 after the well installations. The results of the groundwater



monitoring are provided in Van Houten's report titled, "Quarterly Groundwater Sampling and Downgradient Hydrogeologic Investigation." The groundwater analytical results reported between March 1991 and March 1993 indicate that the highest levels of petroleum hydrocarbons were occurring in monitoring well MW-1, with 400 parts per billion (ppb) of TPH as gasoline as the highest concentration.

In April 1993, approximately 700 cubic yards of contaminated soil were removed from the site. The area of the excavation was along the west side of the property, in the vicinity of monitoring well MW-1, which was abandoned. The depth of the soil excavation ranged from 20 feet at the northeast corner to 9.5 feet along the west wall to 5 feet at the south end of the excavation. Details of the soil excavation are provided in Van Houten's report titled, "Soil Excavation," dated June 14, 1993.

One groundwater monitoring event was completed in September 1993, after removal of the excavated soil. The next groundwater monitoring event occurred in January 1999, with monitoring continuing to the present. In December 2001, BAI drilled four soil borings (BB-1 through BB-4). The results of the drilling activities are discussed in BAI's report titled, "Soil and Groundwater Investigation," dated July 17, 2002.

Exploratory borings BB-8 and BB-9, and boring BB-7 were drilled on October 14, 2004 and October 15, 2004. The results of the drilling are presented in BAI's "Further Site Investigation Report", dated December 27, 2004.

Summaries of the groundwater elevation and analytical results since BAI has been monitoring the site are included in Tables 1 and 2, respectively. The well construction details are summarized in Table 3.

Quarterly Groundwater Monitoring

Wells MW-2 and MW-4 were purged and sampled, and depths to groundwater were measured on March 9, 2005. Monitoring well MW-3 is no longer part of the required sampling program, and was not sampled. Monitoring well MW-3 was not accessible for water level measurements. BAI's groundwater sampling protocol and field reports are included in Appendix A. The groundwater samples were submitted to Alpha Analytical Laboratories, Inc. (Alpha) and analyzed for 1,2-DCA using EPA Test Method 8260. The analytical laboratory report for the groundwater sample is included in Appendix B.



Groundwater Monitoring Results

The depths to groundwater and historical groundwater elevations starting in 1999 are presented in Table 1. The groundwater flow direction and gradient during the March 2005 sampling event could not be calculated because of insufficient data. Since 1999, the groundwater flow direction has ranged from northwest to southwest.

In March 2005, the compound 1,2-DCA was reported in the groundwater sample collected from well MW-2 at a concentration of 1.7 micrograms per liter ($\mu\text{g/l}$). The compound 1,2-DCA was not reported in the MW-4 groundwater sample.


Discussion


The results of groundwater monitoring show that 1,2-DCA continues to be present in groundwater samples collected from well MW-2. The concentrations of 1,2-DCA from September 2002 through March 2005 have been generally stable, ranging from 1.59 to 1.81 $\mu\text{g/l}$, with the exception of the September 2003 data that reported 2.76 $\mu\text{g/l}$. BAI recommends that a meeting be held with the SCDHS-EHD to discuss whether additional activities are necessary.

Sampling at the site will continue on a semi-annual basis for monitoring wells MW-2 and MW-4, until a modification is obtained from the SCDHS-EHD. The next groundwater monitoring event is tentatively scheduled to be performed in August 2005.

If you have any questions regarding this report, please contact us at (707) 838-3027.

Sincerely,


David E. Conley, P.G. NO. 4795
Senior Geologist


Diana M. Dickerson, P.G., R.E.A.
Principal Geologist

cc: Ms. Millie Gallo
Ms. Teri Gallo



LIST OF ATTACHMENTS

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TABLES



TABLE 1. GROUNDWATER ELEVATION DATA

18155 Sonoma Highway
 Boyes Hot Springs, California

| Well Number | Date Measured | Top of Casing Elevation (Feet) | Depth to Groundwater (Feet below TOC) | Groundwater Elevation (Feet, MSL) | Groundwater Flow Direction and Gradient (ft/ft) |
|---------------------|---------------|--------------------------------|---------------------------------------|-----------------------------------|---|
| MW-2 | 8-Jan-99 | 134.03 | 13.42 | 120.61 | Northwest 0.028 |
| MW-3 | 8-Jan-99 | 141.09 | 19.19 | 121.90 | |
| MW-4 | 8-Jan-99 | 133.55 | 11.94 | 121.61 | |
| MW-2 | 11-May-99 | 134.03 | 10.79 | 123.24 | Northwest 0.019 |
| MW-3 | 11-May-99 | 141.09 | 16.64 | 124.45 | |
| MW-4 | 11-May-99 | 133.55 | 9.75 | 123.80 | |
| MW-2 | 16-Jan-02 | 134.03 | 7.91 | 126.12 | Southwest 0.055 |
| MW-3 | 16-Jan-02 | 141.09 | 12.82 | 128.27 | |
| MW-4 | 16-Jan-02 | 133.55 | 8.90 | 124.65 | |
| MW-2 | 18-Sep-02 | 134.03 | 25.64 | 108.39 | -- |
| MW-3 | 18-Sep-02 | 141.09 | dry | -- | |
| MW-4 | 18-Sep-02 | 133.55 | 22.40 | 111.15 | |
| MW-2 | 12-Dec-02 | 134.03 | 23.05 | 110.98 | -- |
| MW-3 | 12-Dec-02 | 141.09 | dry | -- | |
| MW-4 | 12-Dec-02 | 133.55 | 15.46 | 118.09 | |
| MW-2 | 13-Mar-03 | 134.03 | 10.42 | 123.61 | Southwest 0.041 |
| MW-3 | 13-Mar-03 | 141.09 | 15.13 | 125.96 | |
| MW-4 | 13-Mar-03 | 133.55 | 10.91 | 122.64 | |
| MW-2 | 13-Jun-03 | 134.03 | 13.53 | 120.50 | Northwest 0.024 |
| MW-3 | 13-Jun-03 | 141.09 | 20.13 | 120.96 | |
| MW-4 | 13-Jun-03 | 133.55 | 12.14 | 121.41 | |
| MW-2 | 30-Sep-03 | 134.03 | 24.74 | 109.29 | -- |
| MW-3 | 30-Sep-03 | 141.09 | dry | -- | |
| MW-4 | 30-Sep-03 | 133.55 | 21.78 | 111.77 | |
| MW-2 | 5-Mar-04 | 134.03 | 7.06 | 126.97 | -- |
| MW-3 | 5-Mar-04 | 141.09 | 12.90 | 128.19 | |
| MW-4 ⁽¹⁾ | 5-Mar-04 | 133.55 | 8.56 | 124.99 | |
| MW-2 | Aug-23-04 | 134.03 | 25.26 | 108.77 | Northwest 0.129 |
| MW-3 ⁽²⁾ | Aug-23-04 | 141.09 | 22.01 | 119.08 | |
| MW-4 | Aug-23-04 | 133.55 | 22.32 | 111.23 | |



TABLE 1. GROUNDWATER ELEVATION DATA

18155 Sonoma Highway
Boyes Hot Springs, California

| Well Number | Date Measured | Top of Casing Elevation (Feet) | Depth to Groundwater (Feet below TOC) | Groundwater Elevation (Feet, MSL) | Groundwater Flow Direction and Gradient (ft/ft) |
|---------------------|---------------|--------------------------------|---------------------------------------|-----------------------------------|---|
| MW-2 | 9-Mar-05 | 134.03 | 6.79 | 127.24 | -- |
| MW-3 | 9-Mar-05 | 141.09 | nm | | |
| MW-4 ⁽²⁾ | 9-Mar-05 | 133.55 | 8.83 | 124.72 | |

Cumulative data since BAI has been monitoring the site.

TOC = Top of casing surveyed to mean sea level by FitzGerald & Associates, 3/13/91 and 4/12/93.

ft/ft = Foot per foot.

MSL = Mean sea level.

nm = Not measured, well inaccessible.

⁽¹⁾Water in well may not have stabilized, therefore no groundwater flow direction or gradient was calculated.

Water in well may not have stabilized.



TABLE 2. GROUNDWATER ANALYTICAL DATA FOR WELLS

18155 Sonoma Highway
 Boyes Hot Springs, California

| Well Number | Date Sampled | TPH as gasoline (mg/l) | TPH as diesel (mg/l) | BTEX ⁽¹⁾ (µg/l) | MTBE ⁽²⁾ EPA 8260 (µg/l) | 1,2-DCA ⁽³⁾ EPA 8260 (µg/l) | Dissolved Zinc ⁽⁵⁾ (µg/l) |
|-----------------|--------------|------------------------|----------------------|----------------------------|-------------------------------------|--|--------------------------------------|
| MW-2 | 8-Jan-99 | <0.05 | <0.05 | <0.5 | <1.0 | 3.45 | 29.3 |
| MW-2 | 11-May-99 | <0.05 | <0.05 | <0.5 | <0.50 | 3.93 | 56.3 |
| MW-2 | 16-Jan-02 | <0.05 | nr | <0.50 | <1.0 | 2.10 | nr |
| MW-2 | 18-Sep-02 | <0.05 | nr | <0.50 | <1.0 | 1.74 | nr |
| MW-2 | 12-Dec-02 | <0.05 | nr | <0.50 | <1.0 | 1.81 | nr |
| MW-2 | 13-Mar-03 | <0.05 | nr | <0.50 | <1.0 | 1.59 | nr |
| MW-2 | 13-Jun-03 | <0.05 | nr | <0.50 | <1.0 | 1.64 | nr |
| MW-2 | 30-Sep-03 | <0.05 | nr | <0.50 | <1.0 | 2.76 | nr |
| MW-2 | 5-Mar-04 | nr | nr | nr | nr | 1.72 | nr |
| MW-2 | 23-Aug-04 | nr | nr | nr | nr | 1.76 | nr |
| MW-2 | 9-Mar-05 | nr | nr | nr | nr | 1.7 | nr |
| MW-3 | 8-Jan-99 | <0.05 | <0.05 | <0.5 | <1.0 | <0.50 | 24.7 |
| MW-3 | 11-May-99 | <0.05 | <0.05 | <0.5 | <0.50 | <0.50 | 67.7 |
| MW-3 | 16-Jan-02 | <0.05 | nr | <0.50 | <1.0 | <0.50 | nr |
| MW-3 | 13-Mar-03 | <0.05 | nr | <0.50 | <1.0 | <0.50 | nr |
| MW-3 | 13-Jun-03 | <0.05 | nr | <0.50 | <1.0 | <0.50 | nr |
| MW-4 | 8-Jan-99 | <0.05 | <0.05 | <0.5 | 2.27 | <0.50 | 47.6 |
| MW-4 | 11-May-99 | <0.05 | <0.05 | <0.5 | <0.50 | <0.50 | 38.0 |
| MW-4 | 16-Jan-02 | <0.05 | nr | <0.50 | <1.0 | <0.50 | nr |
| MW-4 | 18-Sep-02 | <0.05 | nr | <0.50 | <1.0 | <0.50 | nr |
| MW-4 | 12-Dec-02 | <0.05 | nr | <0.50 | <1.0 | <0.50 | nr |
| MW-4 | 13-Mar-03 | <0.05 | nr | <0.50 | <1.0 | <0.50 | nr |
| MW-4 | 13-Jun-03 | <0.05 | nr | <0.50 | <1.0 | <0.50 | nr |
| MW-4 | 30-Sep-03 | <0.05 | nr | <0.50 | <1.0 | <0.50 | nr |
| MW-4 | 5-Mar-04 | nr | nr | nr | nr | <0.50 | nr |
| MW-4 | 9-Mar-05 | nr | nr | nr | nr | <0.50 | nr |
| Reporting Limit | | 0.050 | 0.05 | 0.50 | ⁽⁴⁾ | ⁽⁴⁾ | ⁽⁴⁾ |

Cumulative data since BAI has been monitoring the site.

mg/l = Milligrams per liter.

µg/l = Micrograms per liter.

< = Not detected at specified laboratory reporting limit.

nr = Not requested.

⁽¹⁾ = Benzene, toluene, ethylbenzene, and xylenes.

⁽²⁾ = Methyl tertiary butyl ether.

⁽³⁾ = 1,2-dichloroethane. Other petroleum oxygenates and lead scavengers, through September 2003, analyzed using EPA Test Method 8260. Only those listed were detected.

⁽⁴⁾ = Reporting limits for EPA Test Method 8260 analytes and metals are presented in original laboratory reports.

⁽⁵⁾ = Dissolved cadmium, chromium, lead, and nickel were not detected when analyzed.



TABLE 3. WELL CONSTRUCTION DETAILS

18155 Sonoma Highway

Boyes Hot Springs, California

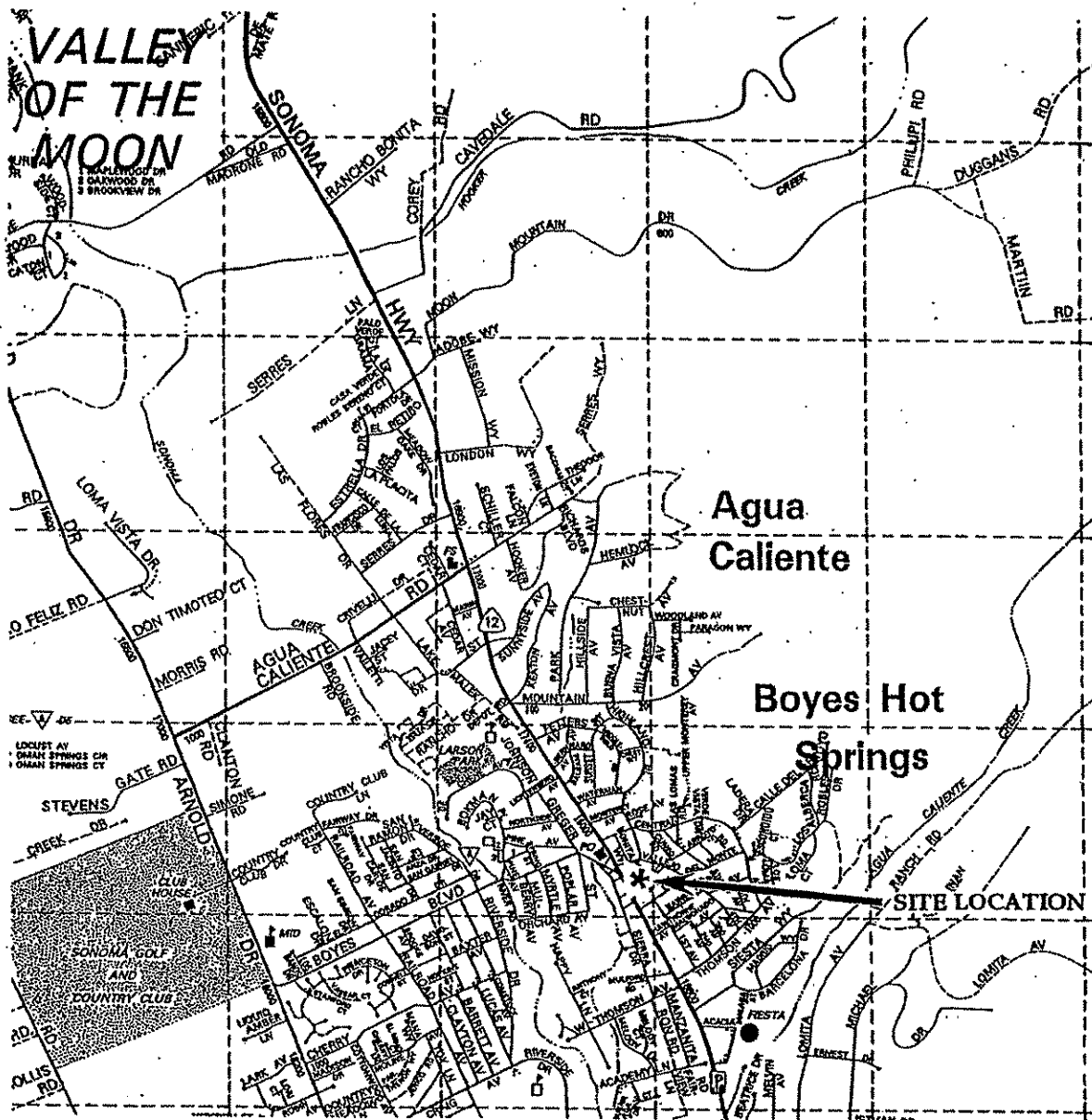
| Well Number | Date Installed | Installed By | Borehole Diameter (inches) | Total Borehole Depth (feet) | Screened Interval (feet) | Total Well Depth (feet) | Casing Diameter (inches) | Screen Slot Size (inches) | PVC Casing Elevation (MSL) | Well Condition |
|-------------|----------------|--------------|----------------------------|-----------------------------|--------------------------|-------------------------|--------------------------|---------------------------|----------------------------|----------------|
| MW-1 | 28-Feb-91 | Van Houten | 8 | 33.5 | 18.5 to 33.5 | 33.5 | 2 | 0.020 | -- | abandoned |
| MW-2 | 28-Feb-91 | Van Houten | 8 | 42 | 20 to 40 | 40 | 2 | 0.020 | 134.03 | existing |
| MW-3 | 1-Mar-91 | Van Houten | 8 | 22.5 | 12.5 to 22.5 | 22.5 | 2 | 0.020 | 141.09 | existing |
| MW-4 | 19-Oct-92 | Van Houten | 8 | 23 | 5 to 23 | 23 | 2 | 0.020 | 133.55 | existing |

MSL = Mean sea level

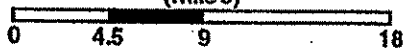


PLATES





APPROXIMATE SCALE
(miles)



Copyright 1995 by
California State Automobile
Association



Brunsing Associates, Inc.
5803 Skylane Blvd., Suite A
Windsor, California 95492
Tel: (707) 838-3027

Job No.: 617.003

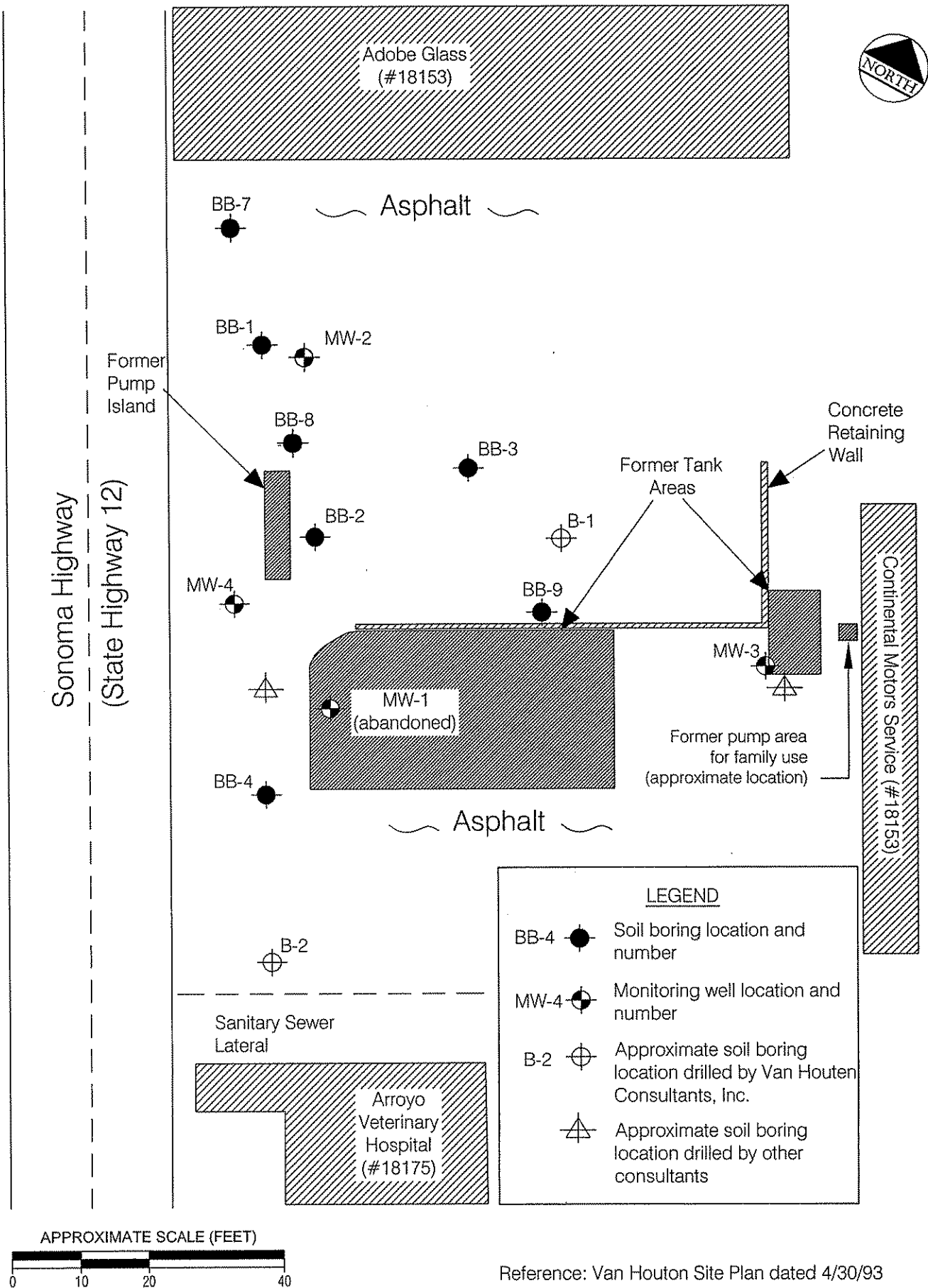
Appr.: *[Signature]*

Date: 05/13/03

SITE VICINITY MAP
18155 Sonoma Highway
Boyes Hot Springs, California

PLATE

1



Brunsing Associates, Inc.
 5803 Skylane Blvd., Suite A
 Windsor, California 95492
 Tel: (707) 838-3027

Job No.: 617

Appr.: *AMO*
 Date: 12/15/04

SITE MAP
 18155 Sonoma Highway
 Boyes Hot Springs, California

PLATE

2

APPENDIX A

Monitoring Well Sampling Protocol and Field Logs



Groundwater Sampling Protocol

Monitoring Wells

Prior to purging a monitoring well, groundwater levels are measured with a Solinst electric depth measurement device, or an interface probe, in all wells that are to be measured. At sites where petroleum hydrocarbons are possible contaminants, the well is checked for floating product using a clear bailer, a steel tape with water/oil paste, or an interface probe, during the initial sampling round. If floating product is measured during the initial sampling round or noted during subsequent sampling rounds, floating product measurements are continued.

After the water level and floating product measurements are complete, the monitoring well is purged until a minimum of three casing volumes of water are removed, water is relatively clear of sediment, and pH, conductivity, and temperature measurements of the water become relatively stable. If the well is purged dry, groundwater samples are collected after the water level in the well recovers to at least 80 percent of the original water column measured in the well prior to sampling, or following a maximum recovery period of two hours. The well is purged using a factory-sealed, disposable, polyethylene bailer, a four-inch diameter submersible Grundfos pump, a two-inch diameter ES-40 purge pump, or a peristaltic pump. The purge water is stored on-site in clean, 55-gallon drums.

A groundwater sample is collected from each monitoring well following re-equilibration of the well after purging. The groundwater sample is collected using a factory-sealed disposable, polyethylene bailer with a sampling port, or a factory-sealed Teflon bailer. A factory provided attachment designed for use with volatile organic compounds (VOCs) is attached to the polyethylene bailer sampling port when collecting samples to be analyzed for VOCs. The groundwater sample is transferred from the bailer into sample container(s) that are obtained directly from the analytical laboratory.

The sample container(s) is labeled with a self-adhesive tag. The following information is included on the tag:

- Project number
- Sample number
- Date and time sample is collected
- Initials of sample collector(s).

Individual log sheets are maintained throughout the sampling operations. The following information is recorded:

- Sample number
- Date and time well sampled and purged
- Sampling location



- Types of sampling equipment used
- Name of sampler(s)
- Volume of water purged.

Following collection of the groundwater sample, the sample is immediately stored on blue ice in an appropriate container. A chain-of-custody form is completed with the following information:

- Date the sample was collected
- Sample number and the number of containers
- Analyses required
- Remarks including preservatives added and any special conditions.

The original copy of the chain-of-custody form accompanies the sample containers to a California-certified laboratory. A copy is retained by BAI and placed in company files.

Reusable sampling equipment including thermometers, pH electrodes, and conductivity probes are cleaned both before and after their use at the site. The following cleaning procedures are used:

- Wash with a potable water and detergent solution or other solutions deemed appropriate
- Rinse with potable water
- Double-rinse with organic-free or deionized water
- Package and seal equipment in plastic bags or other appropriate containers to prevent contact with solvents, dust, or other contaminants.

In addition, the pumps are cleaned by pumping a potable water and detergent solution and deionized water through the system. Cleaning solutions are contained on-site in clean 55-gallon drums.

Domestic and Irrigation Wells

Groundwater samples collected from domestic or irrigation wells are collected from the spigot that is the closest to the well. Prior to collecting the sample, the spigot is allowed to flow for at least 5 minutes to purge the well. The sample is then collected directly into laboratory-supplied containers, sealed, labeled, and stored on blue ice in an appropriate container, as described above. A chain-of-custody form is completed and submitted with the samples to the analytical laboratory.



WATER LEVELS

SHEET 2 OF 4

PROJECT: 18155 SONOMA HIGHWAY

PROJECT NUMBER: 617.070

INSTRUMENT TYPE: ET (WLP)

INITIALS: CDS

DATE: 3-9-05

[illegible]

SHEET 3 OF 4

[illegible]

BRUNSG ASSOCIATES, INC.
ENVIRONMENTAL DIVISION
WELL SAMPLING

SHEET 4 OF 4

PROJECT: 18155 SONOMA HIGHWAY

PROJECT NUMBER: 617.070

WELL # MW-4

PRECIP. IN LAST 5 DAYS: —

WIND ✓

DATE: 3-9-05

STARTING TIME: 1129

FINISHING TIME: 1218

INITIALS: CDS

CALCULATION OF PURGE VOLUME

2" WELL DEPTH: 23.00 - D.T.W. 8.83 = H2O COLUMN: 14.17 X 0.5 = 7.09

4" WELL DEPTH: — - D.T.W. — = H2O COLUMN: — X 2.0 = —

THEREFORE TOTAL PURGE GALLONS EQUALS

7

G
A
L
L
O
N
S

FIELD MEASUREMENTS

| TIME | GALLONS REMOVED | pH | CONDUCTIVITY | TEMP. | OBSERVATIONS |
|------|-----------------|------|--------------|-------|------------------------------|
| 1143 | 1 | 6.99 | 399 | 19.7 | CLOUDY BROWN, NO ODOR, SANDY |
| 1149 | 4 | 6.99 | 401 | 19.6 | CLOUDY BROWN, NO ODOR, SANDY |
| 1156 | 7 | 6.97 | 405 | 19.8 | CLOUDY BROWN, NO ODOR, SANDY |
| | | | | | |
| | | | | | |

SAMPLING:

SAMPLE ANALYSIS:

1, 2 DCA

SAMPLE TIME:

1204

DID WELL GO DRY?

NO

WATER LEVELS:

NOTES:

| TIME | D.T.W. | |
|------|--------|--|
| 1208 | 15.74 | |
| | | |
| | | |
| | | |
| | | |
| | | |

APPENDIX B
Analytical Laboratory Report





FILE COPY

617

Alpha Analytical Laboratories Inc.

208 Mason St. Ukiah, California 95482

e-mail: clientservices@alpha-labs.com • Phone: (707) 468-0401 • Fax: (707) 468-5267

24 March 2005

Brunsing Associates, Inc

Attn: Michelle Floyd Frederick

P.O. Box 588

Windsor, CA 95492

RE: Boyes Hot Springs, 18155 Sonoma Hwy

Work Order: A503383

Enclosed are the results of analyses for samples received by the laboratory on 03/10/05 12:45. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Sheri Speaks

Sheri L. Speaks
Project Manager



Alpha Analytical Laboratories Inc.

208 Mason St. Ukiah, California 95482

e-mail: clientservices@alpha-labs.com • Phone: (707) 468-0401 • Fax: (707) 468-5267

CHEMICAL EXAMINATION REPORT

Page 1 of 4

Brunsing Associates, Inc
P.O. Box 588
Windsor, CA 95492
Attn: Michelle Floyd Frederick

Report Date: 03/24/05 10:18
Project No: 617
Project ID: Boyes Hot Springs, 18155 Sonoma Hw

| | | | |
|--------------|-------------------|-------------|---------------------|
| Order Number | Receipt Date/Time | Client Code | Client PO/Reference |
| A503383 | 03/10/2005 12:45 | BRUNS | |

ANALYTICAL REPORT FOR SAMPLES

| Sample ID | Laboratory ID | Matrix | Date Sampled | Date Received |
|-----------|---------------|--------|----------------|----------------|
| MW-2 | A503383-01 | Water | 03/09/05 11:15 | 03/10/05 12:45 |
| MW-4 | A503383-02 | Water | 03/09/05 12:04 | 03/10/05 12:45 |

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Sheri L. Speaks

Sheri L. Speaks
Project Manager

3/24/2005



Alpha Analytical Laboratories Inc.

208 Mason St. Ukiah, California 95482

e-mail: clientservices@alpha-labs.com • Phone: (707) 468-0401 • Fax: (707) 468-5267

CHEMICAL EXAMINATION REPORT

Page 2 of 4

Brunsing Associates, Inc
P.O. Box 588
Windsor, CA 95492
Attn: Michelle Floyd Frederick

Report Date: 03/24/05 10:18
Project No: 617
Project ID: Boyes Hot Springs, 18155 Sonoma Hw

| Order Number | Receipt Date/Time | Client Code | Client PO/Reference |
|--------------|-------------------|-------------|---------------------|
| A503383 | 03/10/2005 12:45 | BRUNS | |

Alpha Analytical Laboratories, Inc.

| METHOD | BATCH | PREPARED | ANALYZED | DILUTION | RESULT | PQL | NOTE |
|--|-----------|--------------------|----------|----------|-------------------------|----------|--------|
| MW-2 (A503383-01) | | Sample Type: Water | | | Sampled: 03/09/05 11:15 | | |
| Volatile Organic Compounds by EPA Method 8260B | | | | | | | |
| 1,2-Dichloroethane | EPA 8260B | AC52210 | 03/20/05 | 03/22/05 | 1 | 1.7 ug/l | 0.50 |
| Surrogate: Dibromofluoromethane | " | " | " | " | | 94.4 % | 85-129 |
| Surrogate: Toluene-d8 | " | " | " | " | | 82.4 % | 74-137 |
| Surrogate: Bromofluorobenzene | " | " | " | " | | 64.8 % | 45-147 |
| MW-4 (A503383-02) | | Sample Type: Water | | | Sampled: 03/09/05 12:04 | | |
| Volatile Organic Compounds by EPA Method 8260B | | | | | | | |
| 1,2-Dichloroethane | EPA 8260B | AC52210 | 03/20/05 | 03/22/05 | 1 | ND ug/l | 0.50 |
| Surrogate: Dibromofluoromethane | " | " | " | " | | 102 % | 85-129 |
| Surrogate: Toluene-d8 | " | " | " | " | | 87.2 % | 74-137 |
| Surrogate: Bromofluorobenzene | " | " | " | " | | 73.2 % | 45-147 |

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Sheri Speaks

Sheri L. Speaks
Project Manager

3/24/2005



Alpha Analytical Laboratories Inc.

208 Mason St. Ukiah, California 95482

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CHEMICAL EXAMINATION REPORT

Page 3 of 4

Brunsing Associates, Inc
P.O. Box 588
Windsor, CA 95492
Attn: Michelle Floyd Frederick

Report Date: 03/24/05 10:18
Project No: 617
Project ID: Boyes Hot Springs, 18155 Sonoma Hw

Order Number
A503383

Receipt Date/Time
03/10/2005 12:45

Client Code
BRUNS

Client PO/Reference

Volatile Organic Compounds by EPA Method 8260B - Quality Control

| Analyte(s) | Result | PQL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Flag |
|--|--------|------|-------|--|---------------|------|-------------|------|-----------|------|
| Batch AC52210 - EPA 5030 Water GCMS | | | | | | | | | | |
| Blank (AC52210-BLK1) | | | | Prepared: 03/20/05 Analyzed: 03/21/05 | | | | | | |
| 1,2-Dichloroethane | ND | 0.50 | ug/l | | | | | | | |
| Surrogate: Dibromofluoromethane | 25.8 | | " | 25.0 | | 103 | 85-129 | | | |
| Surrogate: Toluene-d8 | 18.1 | | " | 25.0 | | 72.4 | 74-137 | | | S-GC |
| Surrogate: Bromofluorobenzene | 18.5 | | " | 25.0 | | 74.0 | 45-147 | | | |
| LCS (AC52210-BS1) | | | | Prepared: 03/20/05 Analyzed: 03/21/05 | | | | | | |
| 1,2-Dichloroethane | 5.18 | 0.50 | ug/l | 5.00 | | 104 | 78-115 | | | |
| Surrogate: Dibromofluoromethane | 21.5 | | " | 25.0 | | 86.0 | 85-129 | | | |
| Surrogate: Toluene-d8 | 21.1 | | " | 25.0 | | 84.4 | 74-137 | | | |
| Surrogate: Bromofluorobenzene | 20.8 | | " | 25.0 | | 83.2 | 45-147 | | | |
| LCS Dup (AC52210-BSD1) | | | | Prepared: 03/20/05 Analyzed: 03/21/05 | | | | | | |
| 1,2-Dichloroethane | 5.10 | 0.50 | ug/l | 5.00 | | 102 | 78-115 | 1.56 | 25 | |
| Surrogate: Dibromofluoromethane | 20.7 | | " | 25.0 | | 82.8 | 85-129 | | | S-GC |
| Surrogate: Toluene-d8 | 21.8 | | " | 25.0 | | 87.2 | 74-137 | | | |
| Surrogate: Bromofluorobenzene | 20.9 | | " | 25.0 | | 83.6 | 45-147 | | | |
| Matrix Spike (AC52210-MS1) | | | | Source: A503356-01 Prepared: 03/20/05 Analyzed: 03/21/05 | | | | | | |
| 1,2-Dichloroethane | 4.76 | 0.50 | ug/l | 5.00 | ND | 95.2 | 61-134 | | | |
| Surrogate: Dibromofluoromethane | 20.1 | | " | 25.0 | | 80.4 | 85-129 | | | S-GC |
| Surrogate: Toluene-d8 | 20.8 | | " | 25.0 | | 83.2 | 74-137 | | | |
| Surrogate: Bromofluorobenzene | 21.3 | | " | 25.0 | | 85.2 | 45-147 | | | |

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Sheri Speaks

Sheri L. Speaks
Project Manager

3/24/2005



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|--------------|-------------------|-------------|---------------------|
| A503383 | 03/10/2005 12:45 | BRUNS | |

Notes and Definitions

S-GC Surrogate recovery outside of control limits. The data was accepted based on valid recovery of the remaining surrogates.

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

PQL Practical Quantitation Limit



alpha

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Items for Project Manager Review

| LabNumber | Analysis | Analyte | Exception |
|-------------------------------|-----------------|----------------------|-----------------------------|
| AC52210-MS1 | 8260B Full List | Dibromofluoromethane | S-GC |
| AC52210-BSD1 | 8260B Full List | Dibromofluoromethane | S-GC |
| AC52210-BLK1 | 8260B Full List | Toluene-d8 | S-GC |
| AC52210-MS1 | 8260B Full List | Dibromofluoromethane | Exceeds lower control limit |
| AC52210-BSD1 | 8260B Full List | Dibromofluoromethane | Exceeds lower control limit |
| AC52210-BLK1 | 8260B Full List | Toluene-d8 | Exceeds lower control limit |
| Default Report (not modified) | | | |

Chain-of Custody Form

[illegible]

UST ☒ Yes
 Fund Site: ☐ No

FIELD REPORT

PAGE 1 OF 4

 JOB NO: 617 PROJECT: 18155 Sonoma Highway, Boyes Hot Springs, CA
 INITIAL: CDS SUBJECT: GROUNDWATER SAMPLING
 DATE: 3-9-05 PROJECT PHASE NUMBER: 04
 VEHICLE USED: FORD F-150

 Total Time: 8.00
 End. Mileage: 9007
 Beg. Mileage: 8945

TOTAL MILEAGE: 62

| TIME | DESCRIPTION OF WORK AND CONVERSATION RECORD: |
|---|---|
| 0700 | LOAD EQUIPMENT AND SUPPLIES, |
| 0748 | TO SITE, |
| 0906 | ARRIVE AT SITE, SET-UP FOR GROUNDWATER SAMPLING. |
| | MEASURED TWO ROUNDS OF DISTANCE TO WATER AT MW-2. |
| | MEASURED NINE ROUNDS OF DISTANCE TO WATER AT MW-4. |
| | WELL DID NOT EQUILIBRATE. |
| | WELL MW-3 COULD NOT BE ACCESSED FOR WATER LEVEL |
| | MEASUREMENT. |
| | STORED PURGEWATER IN DRUM LOCATED AT THE SOUTHEAST |
| | LIMITS OF THE PROPERTY. |
| | CLOSED WELLS AND MONUMENTS, |
| | DECON SAMPLING EQUIPMENT. |
| | LOAD EQUIPMENT AND SUPPLIES. |
| | COMPLETED FIELD NOTES AND LOGGED SAMPLES ON A CHAIN |
| | OF CUSTODY. |
| 1330 | LEAVE SITE |
| 1447 | ARRIVE AT OFFICE, SUBMITTED SAMPLES FOR |
| | ANALYSIS. |
| | UNLOAD EQUIPMENT AND SUPPLIES. |
| DRUM COUNT: Water = 1 Develpmt Water = Soil = Decon Water = | |

1535 FINISHED WITH WORK

